

SEQUENCE LISTING

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 Barr, Maureen M.

 <120> POLYCYSTIC KIDNEY DISEASE GENE HOMOLOGS REQUIRED FOR MALE MATING BEHAVIOR IN NEMATODES AND ASSAYS BASED THEREON

 <130> 18021-2901

 <140> Unassigned
 <141> 2000-01-06

 <150> 60/115,127

 <151> 1999-01-06

 <160> 16

 <170> PatentIn Ver. 2.0

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 <213> Homo sapiens PKD-1 gene

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BIOLOGY OF HUMAN

675

680

685

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Phe	Gln	Asn	Val	Val	Phe	Asn	Val	Ile	Tyr	Gln	Ser	Ala	Ala	Val	Phe	
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DQ106624-20100424-000000

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acg gta cag ctg cag gcc gtg gtt agg gat ggc acc aac gtc tcc tac Thr Val Gln Leu Gln Ala Val Val Arg Asp Gly Thr Asn Val Ser Tyr 1650 1655 1660	4992
agc tgg act gcc tgg agg gac agg ggc ccc gcc ctg gcc ggc agc ggc Ser Trp Thr Ala Trp Arg Asp Arg Gly Pro Ala Leu Ala Gly Ser Gly 1665 1670 1675 1680	5040
aaa ggc ttc tcg ctc acc gtg ctc gag ggc acc tac cat gtg cag Lys Gly Phe Ser Leu Thr Val Leu Glu Ala Gly Thr Tyr His Val Gln 1685 1690 1695	5088
ctg cgg gcc acc aac atg ctg ggc agc gcc tgg gcc gac tgc acc atg Leu Arg Ala Thr Asn Met Leu Gly Ser Ala Trp Ala Asp Cys Thr Met 1700 1705 1710	5136
gac ttc gtg gag cct gtg ggg tgg ctg atg gtg gcc gcc tcc ccc aac Asp Phe Val Glu Pro Val Gly Trp Leu Met Val Ala Ala Ser Pro Asn 1715 1720 1725	5184
cca gct gcc gtc aac aca agc gtc acc ctc agt gcc gag ctg gct ggt Pro Ala Ala Val Asn Thr Ser Val Thr Leu Ser Ala Glu Leu Ala Gly 1730 1735 1740	5232
ggc agt ggt gtc gta tac act tgg tcc ttg gag gag ggg ctg agc tgg Gly Ser Gly Val Val Tyr Thr Trp Ser Leu Glu Glu Gly Leu Ser Trp	5280

1745	1750	1755	1760	
gag acc tcc gag cca ttt acc acc cat agc ttc ccc aca ccc ggc ctg Glu Thr Ser Glu Pro Phe Thr Thr His Ser Phe Pro Thr Pro Gly Leu 1765	1770		1775	5328
cac ttg gtc acc atg acg gca ggg aac ccg ctg ggc tca gcc aac gcc His Leu Val Thr Met Thr Ala Gly Asn Pro Leu Gly Ser Ala Asn Ala 1780	1785		1790	5376
acc gtg gaa gtg gat gtg cag gtg cct gtg agt ggc ctc agc atc agg Thr Val Glu Val Asp Val Gln Val Pro Val Ser Gly Leu Ser Ile Arg 1795	1800	1805		5424
gcc agc gag ccc gga ggc agc ttc gtg gcg gcc ggg tcc tct gtg ccc Ala Ser Glu Pro Gly Gly Ser Phe Val Ala Ala Gly Ser Ser Val Pro 1810	1815	1820		5472
ttt tgg ggg cag ctg gcc acg ggc acc aat gtg agc tgg tgc tgg gct Phe Trp Gly Gln Leu Ala Thr Gly Thr Asn Val Ser Trp Cys Trp Ala 1825	1830	1835	1840	5520
gtg ccc ggc ggc agc agc aag cgt ggc cct cat gtc acc atg gtc ttc Val Pro Gly Gly Ser Ser Lys Arg Gly Pro His Val Thr Met Val Phe 1845	1850		1855	5568
ccg gat gct ggc acc ttc tcc atc cgg ctc aat gcc tcc aac gca gtc Pro Asp Ala Gly Thr Phe Ser Ile Arg Leu Asn Ala Ser Asn Ala Val 1860	1865	1870		5616
agc tgg gtc tca gcc acg tac aac ctc acg gcg gag gag ccc atc gtg Ser Trp Val Ser Ala Thr Tyr Asn Leu Thr Ala Glu Glu Pro Ile Val 1875	1880	1885		5664
ggc ctg ctg tgg gcc agc agc aag gtg gtg gcg ccc ggg cag ctg Gly Leu Val Leu Trp Ala Ser Ser Lys Val Val Ala Pro Gly Gln Leu 1890	1895	1900		5712
gtc cat ttt cag atc ctg ctg gct gcc ggc tca gct gtc acc ttc cgc Val His Phe Gln Ile Leu Ala Ala Gly Ser Ala Val Thr Phe Arg 1905	1910	1915	1920	5760
cta cag gtc qgc ggg gcc aac ccc gag gtg ctc ccc ggg ccc cgt ttc Leu Gln Val Gly Gly Ala Asn Pro Glu Val Leu Pro Gly Pro Arg Phe 1925	1930		1935	5808
tcc cac agc ttc ccc cgc gtc gga gac cac gtg gtg agc gtg cgg ggc Ser His Ser Phe Pro Arg Val Gly Asp His Val Val Ser Val Arg Gly 1940	1945	1950		5856
aaa aac cac gtg agc tgg gcc cag gcg cag gtg cgc atc gtg gtg ctg Lys Asn His Val Ser Trp Ala Gln Ala Gln Val Arg Ile Val Val Leu 1955	1960	1965		5904
gag gcc gtg agt ggg ctg cag gtg ccc aac tgc tgc gag cct ggc atc Glu Ala Val Ser Gly Leu Gln Val Pro Asn Cys Cys Glu Pro Gly Ile 1970	1975	1980		5952
gcc acg ggc act gag agg aac ttc aca gcc cgc gtg cag cgc ggc tct Ala Thr Gly Thr Glu Arg Asn Phe Thr Ala Arg Val Gln Arg Gly Ser 1985	1990	1995	2000	6000
cgg gtc gcc tac gcc tgg tac ttc tcg ctg cag aag gtc cag ggc gac Arg Val Ala Tyr Ala Trp Tyr Phe Ser Leu Gln Lys Val Gln Gly Asp 2005	2010	2015		6048
tcg ctg gtc atc ctg tcg ggc cgc gac gtc acc tac acg ccc gtg gcc				6096

Ser	Leu	Val	Ile	Leu	Ser	Gly	Arg	Asp	Val	Thr	Tyr	Thr	Pro	Val	Ala
2020									2025						2030
gcg	ggg	ctg	ttg	gag	atc	cag	gtg	cgc	gcc	ttc	aac	gcc	ctg	ggc	agt
Ala	Gly	Leu	Leu	Glu	Ile	Gln	Val	Arg	Ala	Phe	Asn	Ala	Leu	Gly	Ser
2035									2040						2045
gag	aac	cgc	acg	ctg	gtg	ctg	gag	gtt	cag	gac	gcc	gtc	cag	tat	gtg
Glu	Asn	Arg	Thr	Leu	Val	Leu	Glu	Val	Gln	Asp	Ala	Val	Gln	Tyr	Val
2050									2055						2060
gcc	ctg	cag	agc	ggc	ccc	tgc	ttc	acc	aac	cgc	tcg	gcg	cag	ttt	gag
Ala	Leu	Gln	Ser	Gly	Pro	Cys	Phe	Thr	Asn	Arg	Ser	Ala	Gln	Phe	Glu
2065									2070						2080
gcc	gcc	acc	agc	ccc	agc	ccc	cgg	cgt	gtg	gcc	tac	cac	tgg	gac	ttt
Ala	Ala	Thr	Ser	Pro	Ser	Pro	Arg	Arg	Val	Ala	Tyr	His	Trp	Asp	Phe
2085									2090						2095
ggg	gat	ggg	tgc	cca	ggg	cag	gac	aca	gat	gag	ccc	agg	gcc	gag	cac
Gly	Asp	Gly	Ser	Pro	Gly	Gln	Asp	Thr	Asp	Glu	Pro	Arg	Ala	Glu	His
2100									2105						2110
tcc	tac	ctg	agg	cct	ggg	gac	tac	cgc	gtg	cag	gtg	aac	gcc	tcc	aac
Ser	Tyr	Leu	Arg	Pro	Gly	Asp	Tyr	Arg	Val	Gln	Val	Asn	Ala	Ser	Asn
2115									2120						2125
ctg	gtg	agc	ttc	ttc	gtg	gcg	cag	gcc	acg	gtg	acc	gtc	cag	gtg	ctg
Leu	Val	Ser	Phe	Phe	Val	Ala	Gln	Ala	Thr	Val	Thr	Val	Gln	Val	Leu
2130									2135						2140
gcc	tgc	cg	gag	ccg	gag	gtg	gac	gtg	gtc	ctg	ccc	ctg	cag	gtg	ctg
Ala	Cys	Arg	Glu	Pro	Glu	Val	Asp	Val	Val	Leu	Pro	Leu	Gln	Val	Leu
2145									2150						2160
atg	cgg	cga	tca	cag	cgc	aat	tac	ttg	gag	gcc	cac	gtt	gac	ctg	cgc
Met	Arg	Arg	Ser	Gln	Arg	Asn	Tyr	Leu	Glu	Ala	His	Val	Asp	Leu	Arg
2165									2170						2175
gac	tgc	gtc	acc	tac	cag	act	gag	tac	cgc	tgg	gag	gtg	tat	cgc	acc
Asp	Cys	Val	Thr	Tyr	Gln	Thr	Glu	Tyr	Arg	Trp	Glu	Val	Tyr	Arg	Thr
2180									2185						2190
gcc	agc	tgc	cag	cg	ccg	ggg	cgc	cca	gcg	cgt	gtg	gcc	ctg	ccc	ggc
Ala	Ser	Cys	Gln	Arg	Pro	Gly	Arg	Pro	Ala	Arg	Val	Ala	Leu	Pro	Gly
2195									2200						2205
gtg	gac	gtg	agc	cg	cct	cg	ctg	gtg	ctg	ccg	cg	ctg	g	ct	c
Val	Asp	Val	Ser	Arg	Pro	Arg	Leu	Val	Leu	Pro	Arg	Leu	Ala	Leu	Pro
2210									2215						2220
gtg	ggg	cac	tac	tgc	ttt	gtg	ttt	gtc	gtg	tca	ttt	ggg	gac	acg	cca
Val	Gly	His	Tyr	Cys	Phe	Val	Phe	Val	Val	Ser	Phe	Gly	Asp	Thr	Pro
2225									2230						2240
tg	aca	cag	agc	atc	cag	gcc	aat	gtg	acg	gtg	gcc	ccc	gag	cgc	ctg
Leu	Thr	Gln	Ser	Ile	Gln	Ala	Asn	Val	Thr	Val	Ala	Pro	Glu	Arg	Leu
2245									2250						2255
tg	ccc	atc	att	gag	gg	gg	tca	tac	cgc	gtg	tgg	tca	gac	aca	cg
al	Pro	Ile	Ile	Glu	Gly	Ser	Tyr	Arg	Val	Trp	Ser	Asp	Thr	Arg	
2260									2265						2270
ac	ctg	gtg	ctg	gt	gg	agc	gag	tcc	tac	gac	ccc	aac	ctg	gag	gac
sp	Leu	Val	Leu	Asp	Gly	Ser	Tyr	Asp	Pro	Asn	Leu	Glu	Asp		
2275									2280						2285

ggc gac cag acg ccg ctc agt ttc cac tgg gcc tgt gtg gct tcg aca Gly Asp Gln Thr Pro Leu Ser Phe His Trp Ala Cys Val Ala Ser Thr 2290 2295 2300	6912
cag agg gag gct ggc ggg tgt gcg ctg aac ttt ggg ccc cgc ggg agc Gln Arg Glu Ala Gly Gly Cys Ala Leu Asn Phe Gly Pro Arg Gly Ser 2305 2310 2315 2320	6960
agc acg gtc acc att cca ccg gag ccg ctg gcg gct ggc gtg gag tac Ser Thr Val Thr Ile Pro Arg Glu Arg Leu Ala Ala Gly Val Glu Tyr 2325 2330 2335	7008
acc ttc acg ctg acc gtg tgg aag gcc ggc cgc aag gag gag gcc acc Thr Phe Ser Leu Thr Val Trp Lys Ala Gly Arg Lys Glu Glu Ala Thr 2340 2345 2350	7056
aac cag acg gtg ctg atc ccg agt ggc ccg gtg ccc att gtg tcc ttg Asn Gln Thr Val Leu Ile Arg Ser Gly Arg Val Pro Ile Val Ser Leu 2355 2360 2365	7104
gag tgt gtg tcc tgc aag gca cag gcc gtg tac gaa gtg agc cgc agc Glu Cys Val Ser Cys Lys Ala Gln Ala Val Tyr Glu Val Ser Arg Ser 2370 2375 2380	7152
tcc tac gtg tac ttg gag ggc cgc tgc ctc aat tgc agc agc ggc tcc Ser Tyr Val Tyr Leu Glu Gly Arg Cys Leu Asn Cys Ser Ser Gly Ser 2385 2390 2395 2400	7200
aag cga ggg ccg tgg gct gca cgt acg ttc agc aac aag acg ctg gtg Lys Arg Gly Arg Trp Ala Ala Arg Thr Phe Ser Asn Lys Thr Leu Val 2405 2410 2415	7248
ctg gat gag acc acc aca tcc acg ggc agt gca ggc atg cga ctg gtg Leu Asp Glu Thr Thr Ser Thr Gly Ser Ala Gly Met Arg Leu Val 2420 2425 2430	7296
ctg cgg cgg ggc gtg ctg ccg gac ggc gag gga tac acc ttc acg ctc Leu Arg Arg Gly Val Leu Arg Asp Gly Glu Gly Tyr Thr Phe Thr Leu 2435 2440 2445	7344
acg gtg ctg ggc cgc tct ggc gag gag ggc tgc gcc tcc atc cgc Thr Val Leu Gly Arg Ser Gly Glu Glu Gly Cys Ala Ser Ile Arg 2450 2455 2460	7392
ctg tcc ccc aac cgc ccg ctg ggg ggc tct tgc cgc ctc ttc cca Leu Ser Pro Asn Arg Pro Pro Leu Gly Gly Ser Cys Arg Leu Phe Pro 2465 2470 2475 2480	7440
ctg ggc gct gtg cac gcc ctc acc acc aag gtg cac ttc gaa tgc acg Leu Gly Ala Val His Ala Leu Thr Thr Lys Val His Phe Glu Cys Thr 2485 2490 2495	7488
ggc tgg cat gac gcg gag gat gct ggc gcc ccg ctg gtg tac gcc ctg Gly Trp His Asp Ala Glu Asp Ala Gly Ala Pro Leu Val Tyr Ala Leu 2500 2505 2510	7536
ctg ctg cgg cgc tgt ccg ccg cac tgc gag gag ttc tgt gtc tac Leu Leu Arg Arg Cys Arg Gln Gly His Cys Glu Glu Phe Cys Val Tyr 2515 2520 2525	7584
aag ggc agc ctc tcc agc tac gga gcc gtg ctg ccc ccg ggt ttc agg Lys Gly Ser Leu Ser Ser Tyr Gly Ala Val Leu Pro Pro Gly Phe Arg 2530 2535 2540	7632
cca cac ttc gag gtg ggc ctg gcc gtg gtg cag gac cag ctg gga Pro His Phe Glu Val Gly Leu Ala Val Val Val Gln Asp Gln Leu Gly 2545 2550 2555 2560	7680

● ●

gcc gct gtg gtc gcc ctc aac agg tct ttg gcc atc acc ctc cca gag Ala Ala Val Val Ala Leu Asn Arg Ser Leu Ala Ile Thr Leu Pro Glu 2565 2570 2575	7728
ccc aac ggc agc gca acg ggg ctc aca gtc tgg ctg cac ggg ctc acc Pro Asn Gly Ser Ala Thr Gly Leu Thr Val Trp Leu His Gly Leu Thr 2580 2585 2590	7776
gct agt gtg ctc cca ggg ctg ctg cgg cag gcc gat ccc cag cac gtc Ala Ser Val Leu Pro Gly Leu Leu Arg Gln Ala Asp Pro Gln His Val 2595 2600 2605	7824
atc gag tac tcg ttg gcc ctg gtc acc gtg ctg aac gag tac gag cgg Ile Glu Tyr Ser Leu Ala Leu Val Thr Val Leu Asn Glu Tyr Glu Arg 2610 2615 2620	7872
gcc ctg gac gtg gcg gca gag ccc aag cac gag cgg cag cac cga gcc Ala Leu Asp Val Ala Ala Glu Pro Lys His Glu Arg Gln His Arg Ala 2625 2630 2635 2640	7920
cag ata cgc aag aac atc acg gag act ctg gtg tcc ctg agg gtc cac Gln Ile Arg Lys Asn Ile Thr Glu Thr Leu Val Ser Leu Arg Val His 2645 2650 2655	7968
act gtg gat gac atc cag cag atc gct gct gcg ctg gcc cag tgc atg Thr Val Asp Asp Ile Gln Gln Ile Ala Ala Leu Ala Gln Cys Met 2660 2665 2670	8016
ggg ccc aqc agg gag ctc gta tgc cgc tgc ctg aag cag acg ctg Gly Pro Ser Arg Glu Leu Val Cys Arg Ser Cys Leu Lys Gln Thr Leu 2675 2680 2685	8064
cac aag ctg gag gcc atg atg ctc atc ctg cag gca gag acc acc gcg His Lys Leu Glu Ala Met Met Leu Ile Leu Gln Ala Glu Thr Thr Ala 2690 2695 2700	8112
ggc acc gtg acg ccc acc gcc atc gga gac agc atc ctc aac atc aca Gly Thr Val Thr Pro Thr Ala Ile Gly Asp Ser Ile Leu Asn Ile Thr 2705 2710 2715 2720	8160
gga gac ctc atc cac ctg gcc acg tcg gac gtg cgg gca cca cag ccc Gly Asp Leu Ile His Leu Ala Ser Ser Asp Val Arg Ala Pro Gln Pro 2725 2730 2735	8208
tca gag ctg gga gag tca cca tct cgg atg gtg gcg tcc cag gcc Ser Glu Leu Gly Ala Glu Ser Pro Ser Arg Met Val Ala Ser Gln Ala 2740 2745 2750	8256
tac aac ctg acc tct gcc ctc atg cgc atc ctc atg cgc tcc cgc gtg Tyr Asn Leu Thr Ser Ala Leu Met Arg Ile Leu Met Arg Ser Arg Val 2755 2760 2765	8304
ctc aac gag gag ccc ctg acg ctg gcg ggc gag gag atc gtg gcc cag Leu Asn Glu Glu Pro Leu Thr Leu Ala Gly Glu Glu Ile Val Ala Gln 2770 2775 2780	8352
ggc aag cgc tcg gac ccg cgg agc ctg tgc tat ggc ggc gcc cca Gly Lys Arg Ser Asp Pro Arg Ser Leu Leu Cys Tyr Gly Ala Pro 2785 2790 2795 2800	8400
ggg cct ggc tgc cac ttc tcc atc ccc gag gct ttc agc ggg gcc ctg Gly Pro Gly Cys His Phe Ser Ile Pro Glu Ala Phe Ser Gly Ala Leu 2805 2810 2815	8448
gcc aac ctc agt gac gtg gtg cag ctc atc ttt ctg gtg gac tcc aat Ala Asn Leu Ser Asp Val Val Gln Leu Ile Phe Leu Val Asp Ser Asn	8496

DRAFT - VERSIÓN 1

2820

2825

2830

ccc ttt ccc ttt ggc tat atc agc aac tac acc gtc tcc acc aag gtg Pro Phe Pro Phe Gly Tyr Ile Ser Asn Tyr Thr Val Ser Thr Lys Val 2835	2840	2845	8544
gcc tcg atg gca ttc cag aca cag gcc ggc gcc cag atc ccc atc gag Ala Ser Met Ala Phe Gln Thr Gln Ala Gly Ala Gln Ile Pro Ile Glu 2850	2855	2860	8592
cgg ctg gcc tca gag cgc gcc atc acc gtg aag gtg ccc aac aac tcg Arg Leu Ala Ser Glu Arg Ala Ile Thr Val Lys Val Pro Asn Asn Ser 2865	2870	2875	8640
gac tgg gct gcc cggtt cgc ggc cac cgc agc tcc gcc aac tcc gcc aac tcc Asp Trp Ala Ala Arg Gly His Arg Ser Ser Ala Asn Ser Ala Asn Ser 2885	2890	2895	8688
gtt gtg gtc cag ccc cag gcc tcc gtc ggt gct gtg gtc acc ctg gac Val Val Val Gln Pro Gln Ala Ser Val Gly Ala Val Val Thr Leu Asp 2900	2905	2910	8736
agc agc aac cct gcg ggg ctg cat ctg cag ctc aac tat acg ctg Ser Ser Asn Pro Ala Ala Gly Leu His Leu Gln Leu Asn Tyr Thr Leu 2915	2920	2925	8784
ctg gac ggc cac tac ctg tct gag gaa cct gag ccc tac ctg gca gtc Leu Asp Gly His Tyr Leu Ser Glu Glu Pro Glu Pro Tyr Leu Ala Val 2930	2935	2940	8832
tac cta cac tcg gag ccc cgg ccc aat gag cac aac tgc tcg gct agc Tyr Leu His Ser Glu Pro Arg Pro Asn Glu His Asn Cys Ser Ala Ser 2945	2950	2955	8880
agg agg atc cgc cca gag tca ctc cag ggt gct gac cac cgg ccc tac Arg Arg Ile Arg Pro Glu Ser Leu Gln Gly Ala Asp His Arg Pro Tyr 2965	2970	2975	8928
acc ttc ttc att tcc ccg ggg agc aga gac cca gcg ggg agt tac cat Thr Phe Ile Ser Pro Gly Ser Arg Asp Pro Ala Gly Ser Tyr His 2980	2985	2990	8976
ctg aac ctc tcc agc cac ttc cgc tgg tcg gcg ctg cag gtg tcc gtg Leu Asn Leu Ser Ser His Phe Arg Trp Ser Ala Leu Gln Val Ser Val 2995	3000	3005	9024
ggc ctg tac acg tcc ctg tgc cag tac ttc agc gag gag gac atg gtg Gly Leu Tyr Thr Ser Leu Cys Gln Tyr Phe Ser Glu Glu Asp Met Val 3010	3015	3020	9072
tgg cgg aca gag ggg ctg ctg ccc ctg gag gag acc tcg ccc cgc cag Trp Arg Thr Glu Gly Leu Leu Pro Leu Glu Glu Thr Ser Pro Arg Gln 3025	3030	3035	9120
gcc gtc tgc ctc acc cgc cac ctc acc gcc ttc ggc gcc agc ctc ttc Ala Val Cys Leu Thr Arg His Leu Thr Ala Phe Gly Ala Ser Leu Phe 3045	3050	3055	9168
gtg ccc cca agc cat gtc cgc ttt gtg ttt cct gag ccg aca gcg gat Val Pro Pro Ser His Val Arg Phe Val Phe Pro Glu Pro Thr Ala Asp 3060	3065	3070	9216
gta aac tac atc gtc atg ctg aca tgt gct gtg tgc ctg gtg acc tac Val Asn Tyr Ile Val Met Leu Thr Cys Ala Val Cys Leu Val Thr Tyr 3075	3080	3085	9264
atg gtc atg gcc gcc atc ctg cac aag ctg gac cag ttg gat gcc agc			9312

Met Val Met Ala Ala Ile Leu His Leu Asp Gln Leu Asp Ala Ser			
3090	3095	3100	
cgg ggc cgc gcc atc cct ttc tgt ggg cag cgg ggc cgc ttc aag tac			9360
Arg Gly Arg Ala Ile Pro Phe Cys Gly Gln Arg Gly Arg Phe Lys Tyr			
3105	3110	3115	3120
gag atc ctc gtc aag aca gca ggc tgg ggc cgg ggc tca ggt acc acg gcc			9408
Glu Ile Leu Val Lys Thr Gly Trp Gly Arg Gly Ser Gly Thr Thr Ala			
3125	3130	3135	
cac gtg ggc atc atg ctg tat ggg gtg gac agc cgg agc ggc cac cgg			9456
His Val Gly Ile Met Leu Tyr Gly Val Asp Ser Arg Ser Gly His Arg			
3140	3145	3150	
cac ctg gac ggc gac aga gcc ttc cac cgc aac agc ctg gac atc ttc			9504
His Leu Asp Gly Asp Arg Ala Phe His Arg Asn Ser Leu Asp Ile Phe			
3155	3160	3165	
cgg atc gcc acc ccg cac agc ctg ggt agc gtg tgg aag atc cga gtg			9552
Arg Ile Ala Thr Pro His Ser Leu Gly Ser Val Trp Lys Ile Arg Val			
3170	3175	3180	
tgg cac gac aac aaa ggg ctc agc cct gcc tgg ttc ctg cag cac gtc			9600
Trp His Asp Asn Lys Gly Leu Ser Pro Ala Trp Phe Leu Gln His Val			
3185	3190	3195	3200
atc gtc agg gac ctg cag acg gca cgc agc gcc ttc ttc ctg gtc aat			9648
Ile Val Arg Asp Leu Gln Thr Ala Arg Ser Ala Phe Phe Leu Val Asn			
3205	3210	3215	
gac tgg ctt tcg gtg gag acg gag gcc aac ggg ggc ctg gtg gag aag			9696
Asp Trp Leu Ser Val Glu Thr Glu Ala Asn Gly Gly Leu Val Glu Lys			
3220	3225	3230	
gag gtg ctg gcc gcg agc gac gca gcc ctt ttg cgc ttc cgg cgc ctg			9744
Glu Val Leu Ala Ala Ser Asp Ala Ala Leu Leu Arg Phe Arg Arg Leu			
3235	3240	3245	
ctg gtg gct gag ctg cag cgt ggc ttc ttt gac aag cac atc tgg ctc			9792
Leu Val Ala Glu Leu Gln Arg Gly Phe Phe Asp Lys His Ile Trp Leu			
3250	3255	3260	
tcc ata tgg gac cgg ccg cct cgt agc cgt ttc act cgc atc cag agg			9840
Ser Ile Trp Asp Arg Pro Pro Arg Ser Arg Phe Thr Arg Ile Gln Arg			
3265	3270	3275	3280
gcc acc tgc tgc gtt ctc ctc atc tgc ctc ttc ctg ggc gcc aac gcc			9888
Ala Thr Cys Cys Val Leu Leu Ile Cys Leu Phe Leu Gly Ala Asn Ala			
3285	3290	3295	
gtg tgg tac ggg gct gtt ggc gac tct gcc tac agc acg agg cat gtg			9936
Val Trp Tyr Ala Val Gly Asp Ser Ala Tyr Ser Thr Gly His Val			
3300	3305	3310	
tcc agg ctg agc ccg ctg agc gtc gac aca gtc gct gtt ggc ctg gtg			9984
Ser Arg Leu Ser Pro Leu Ser Val Asp Thr Val Ala Val Gly Leu Val			
3315	3320	3325	
tcc agc gtg gtt gtc tat ccc gtc tac ctg gcc atc ctt ttt ctc ttc			10032
Ser Ser Val Val Val Tyr Pro Val Tyr Leu Ala Ile Leu Phe Leu Phe			
3330	3335	3340	
cggtatcgccggagc aaggtggctggaggccagcggcccccaca cctgcc			10080
Arg Met Ser Arg Ser Lys Val Ala Gly Ser Pro Ser Pro Thr Pro Ala			
3345	3350	3355	3360

10128

ggg cag cag gtg ctg gac atc gac agc tgc ctg gac tcg tcc gtg ctg
Gly Gln Gln Val Leu Asp Ile Asp Ser Cys Leu Asp Ser Ser Val Leu
3365 3370 3375

10176

gac agc tcc ttc ctc acg ttc tca ggc ctc cac gct gag cag gcc ttt
Asp Ser Ser Phe Leu Thr Phe Ser Gly Leu His Ala Glu Gln Ala Phe
3380 3385 3390

10224

gtt gga cag atg aag agt gac ttg ttt ctg gat gat tct aag agt ctg
Val Gly Gln Met Lys Ser Asp Leu Phe Leu Asp Asp Ser Lys Ser Leu
3395 3400 3405

10272

gtg tgc tgg ccc tcc ggc gag gga acg ctc agt tgg ccg gac ctg ctc
Val Cys Trp Pro Ser Gly Glu Gly Thr Leu Ser Trp Pro Asp Leu Leu
3410 3415 3420

10320

agt gac ccg tcc att gtg ggt agc aat ctg cg^g cag ctg gca cg^g ggc
Ser Asp Pro Ser Ile Val Gly Ser Asn Leu Arg Gln Leu Ala Arg Gly
3425 3430 3435 3440

10368

cag gcg ggc cat ggg ctg ggc cca gag gag gac ggc ttc tcc ctg gcc
Gln Ala Gly His Gly Leu Gly Pro Glu Glu Asp Gly Phe Ser Leu Ala
3445 3450 3455

10416

agc ccc tac tcg cct gcc aaa tcc ttc tca gca tca gat gaa gac ctg
Ser Pro Tyr Ser Pro Ala Lys Ser Phe Ser Ala Ser Asp Glu Asp Leu
3460 3465 3470

10464

atc cag cag gtc ctt gcc gag ggg gtc agc agc cca gcc cct acc caa
Ile Gln Gln Val Leu Ala Glu Gly Val Ser Ser Pro Ala Pro Thr Gln
3475 3480 3485

10512

gac acc cac atg gaa acg gac ctg ctc agc agc ctg tcc agc act cct
Asp Thr His Met Glu Thr Asp Leu Leu Ser Ser Leu Ser Ser Thr Pro
3490 3495 3500

10560

ggg gag aag aca gag acg ctg gcg ctg cag agg ctg ggg gag ctg ggg
Gly Glu Lys Thr Glu Thr Leu Ala Leu Gln Arg Leu Gly Glu Leu Gly
3505 3510 3515 3520

10608

cca ccc agc cca ggc ctg aac tgg gaa cag ccc cag gca gcg agg ctg
Pro Pro Ser Pro Gly Leu Asn Trp Glu Gln Pro Gln Ala Ala Arg Leu
3525 3530 3535

10656

tcc agg aca gga ctg gtg gag ggt ctg cgg aag cgc ctg ctg ccg gcc
Ser Arg Thr Gly Leu Val Glu Gly Leu Arg Lys Arg Leu Leu Pro Ala
3540 3545 3550

10704

tgg tgt gcc tcc ctg gcc cac ggg ctc agc ctg ctc ctg gtg gct gtg
Trp Cys Ala Ser Leu Ala His Gly Leu Ser Leu Leu Val Ala Val
3555 3560 3565

10752

gct gtg gct gtc tca ggg tgg gtg ggt gcg agc ttc ccc ccg ggc gtg
Ala Val Ala Val Ser Gly Trp Val Gly Ala Ser Phe Pro Pro Gly Val
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10800

agt gtt gcg tgg ctc ctg tcc agc agc gcc agc ttc ctg gcc tca ttc
Ser Val Ala Trp Leu Leu Ser Ser Ala Ser Phe Leu Ala Ser Phe
3585 3590 3595 3600

10848

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Leu Gly Trp Glu Pro Leu Lys Val Leu Leu Glu Ala Leu Tyr Phe Ser
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10896

ctg gtg gcc aag cgg ctg cac ccg gat gaa gat gac acc ctg gta gag
Leu Val Ala Lys Arg Leu His Pro Asp Glu Asp Asp Thr Leu Val Glu
3620 3625 3630

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ccc cac ggc ttt gca ctc ttc ctg gcc aag gaa gaa gcc cgc aag gtc Pro His Gly Phe Ala Leu Phe Leu Ala Lys Glu Glu Ala Arg Lys Val 3650 3655 3660	10992
aag agg cta cat ggc atg ctg cgg agc ctc ctg gtg tac atg ctt ttt Lys Arg Leu His Gly Met Leu Arg Ser Leu Leu Val Tyr Met Leu Phe 3665 3670 3675 3680	11040
ctg ctg gtg acc ctc ctg gcc agc tat ggg gat gcc tca tgc cat ggg Leu Leu Val Thr Leu Leu Ala Ser Tyr Gly Asp Ala Ser Cys His Gly 3685 3690 3695	11088
cac gcc tac cgt ctg caa agc gcc atc aag cag gag ctg cac agc cgg His Ala Tyr Arg Leu Gln Ser Ala Ile Lys Gln Glu Leu His Ser Arg 3700 3705 3710	11136
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cac gtg ctg ctg ccc tac gtc cac ggg aac cag tcc agc cca gag ctg His Val Leu Leu Pro Tyr Val His Gly Asn Gln Ser Ser Pro Glu Leu 3730 3735 3740	11232
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agc acc agc gat tac gac gtt ggc tgg gag agt cct cac aat ggc tcg Ser Thr Ser Asp Tyr Asp Val Gly Trp Glu Ser Pro His Asn Gly Ser 3780 3785 3790	11376
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3890

3895

3900

gtg tgc ctg ctg ttc gcc gtg cac ttc gcc gtg gag gcc cgt Val Cys Leu Leu Leu Phe Ala Val His Phe Ala Val Ala Glu Ala Arg 3905	3910	3915	3920	11760
act tgg cac agg gaa ggg cgc tgg cgc gtg ctg cgg ctc gga gcc tgg Thr Trp His Arg Glu Gly Arg Trp Arg Val Leu Arg Leu Gly Ala Trp 3925	3930	3935		11808
gcg cgg tgg ctg ctg gtg gcg ctg acg gcg gcc acg gca ctg gta cgc Ala Arg Trp Leu Leu Val Ala Leu Thr Ala Ala Thr Ala Leu Val Arg 3940	3945	3950		11856
ctc gcc cag ctg ggt gcc gct gac cgc cag tgg acc cgt ttc gtg cgc Leu Ala Gln Leu Gly Ala Ala Asp Arg Gln Trp Thr Arg Phe Val Arg 3955	3960	3965		11904
ggc cgc ccg cgc cgc ttc act agc ttc gac cag gtg gcg cac gtg agc Gly Arg Pro Arg Arg Phe Thr Ser Phe Asp Gln Val Ala His Val Ser 3970	3975	3980		11952
tcc gca gcc cgt ggc ctg gcg gcc tcg ctg ctc ttc ctg ctt ttg gtc Ser Ala Ala Arg Gly Leu Ala Ala Ser Leu Leu Phe Leu Leu Leu Val 3985	3990	3995	4000	12000
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cac ctg tca ccc ctg ctg tgt gtg ggg ctc tgg gca ctg cgg ctg tgg His Leu Ser Pro Leu Leu Cys Val Gly Leu Trp Ala Leu Arg Leu Trp 4085	4090	4095		12288
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atg gtg gag ttg ttc ctg cgc agg ctg cgc ctc tgg atg ggc ctc agc Met Val Glu Leu Phe Leu Arg Arg Leu Arg Leu Trp Met Gly Leu Ser 4130	4135	4140		12432
aag gtc aag gag ttc cgc cac aaa gtc cgc ttt gaa ggg atg gag cgc Lys Val Lys Glu Phe Arg His Lys Val Arg Phe Glu Gly Met Glu Pro 4145	4150	4155	4160	12480
ctg ccc tct cgc tcc tcc agg ggc tcc aag gta tcc ccg gat gtg ccc				12528

Leu Pro Ser Arg Ser Ser Arg Gly Ser Lys Val Ser Pro Asp Val Pro		
4165	4170	4175
cca ccc agc gct ggc tcc gat gcc tcg cac ccc tcc acc tcc tcc agc		12576
Pro Pro Ser Ala Gly Ser Asp Ala Ser His Pro Ser Thr Ser Ser Ser		
4180	4185	4190
caq ctg gat ggg ctg agc gtg agc ctg ggc cgg ctg ggg aca agg tgt		12624
Gln Leu Asp Gly Leu Ser Val Ser Leu Gly Arg Leu Gly Thr Arg Cys		
4195	4200	4205
gag cct gag ccc tcc cgc ctc caa gcc gtg ttc gag gcc ctg ctc acc		12672
Glu Pro Glu Pro Ser Arg Leu Gln Ala Val Phe Glu Ala Leu Leu Thr		
4210	4215	4220
cag ttt gac cga ctc aac cag gcc aca gag gac gtc tac cag ctg gag		12720
Gln Phe Asp Arg Leu Asn Gln Ala Thr Glu Asp Val Tyr Gln Leu Glu		
4225	4230	4235
4240		
cag cag ctg cac agc ctg caa ggc cgc agg agc agc cgg gcg ccc gcc		12768
Gln Gln Leu His Ser Leu Gln Gly Arg Arg Ser Ser Arg Ala Pro Ala		
4245	4250	4255
gga tct tcc cgt ggc cca tcc ccg ggc ctg cgg cca gca ctg ccc agc		12816
Gly Ser Ser Arg Gly Pro Ser Pro Gly Leu Arg Pro Ala Leu Pro Ser		
4260	4265	4270
cgc ctt gcc cgg gcc agt cgg ggt gtg gac ctg gcc act ggc ccc agc		12864
Arg Leu Ala Arg Ala Ser Arg Gly Val Asp Leu Ala Thr Gly Pro Ser		
4275	4280	4285
agg aca ccc ctt cgg gcc aag aac aag gtc cac ccc agc agc act tag		12912
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<211> 4303		
<212> PRT		
<213> Homo sapiens PKD-1 protein		
<400> 2		
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15		
Leu Trp Leu Gly Ala Leu Ala Gly Gly Pro Gly Arg Gly Cys Gly Pro		
20	25	30
Cys Glu Pro Pro Cys Leu Cys Gly Pro Ala Pro Gly Ala Ala Cys Arg		
35	40	45
Val Asn Cys Ser Gly Arg Gly Leu Arg Thr Leu Gly Pro Ala Leu Arg		
50	55	60
Ile Pro Ala Asp Ala Thr Glu Leu Asp Val Ser His Asn Leu Leu Arg		
65	70	75
80		
Ala Leu Asp Val Gly Leu Leu Ala Asn Leu Ser Ala Leu Ala Glu Leu		
85	90	95
Asp Ile Ser Asn Asn Lys Ile Ser Thr Leu Glu Glu Gly Ile Phe Ala		
100	105	110
Asn Leu Phe Asn Leu Ser Glu Ile Asn Leu Ser Gly Asn Pro Phe Glu		
115	120	125
Cys Asp Cys Gly Leu Ala Trp Leu Pro Gln Trp Ala Glu Glu Gln Gln		

130

135

140

Val Arg Val Val Gln Pro Glu Ala Ala Thr Cys Ala Gly Pro Gly Ser
 145 150 155 160

Leu Ala Gly Gln Pro Leu Leu Gly Ile Pro Leu Leu Asp Ser Gly Cys
 165 170 175

Gly Glu Glu Tyr Val Ala Cys Leu Pro Asp Asn Ser Ser Gly Thr Val
 180 185 190

Ala Ala Val Ser Phe Ser Ala Ala His Glu Gly Leu Leu Gln Pro Glu
 195 200 205

Ala Cys Ser Ala Phe Cys Phe Ser Thr Gly Gln Gly Leu Ala Ala Leu
 210 215 220

Ser Glu Gln Gly Trp Cys Leu Cys Gly Ala Ala Gln Pro Ser Ser Ala
 225 230 235 240

Ser Phe Ala Cys Leu Ser Leu Cys Ser Gly Pro Pro Ala Pro Pro Ala
 245 250 255

Pro Thr Cys Arg Gly Pro Thr Leu Leu Gln His Val Phe Pro Ala Ser
 260 265 270

Pro Gly Ala Thr Leu Val Gly Pro His Gly Pro Leu Ala Ser Gly Gln
 275 280 285

Leu Ala Ala Phe His Ile Ala Ala Pro Leu Pro Val Thr Asp Thr Arg
 290 295 300

Trp Asp Phe Gly Asp Gly Ser Ala Glu Val Asp Ala Ala Gly Pro Ala
 305 310 315 320

Ala Ser His Arg Tyr Val Leu Pro Gly Arg Tyr His Val Thr Ala Val
 325 330 335

Leu Ala Leu Gly Ala Gly Ser Ala Leu Leu Gly Thr Asp Val Gln Val
 340 345 350

Glu Ala Ala Pro Ala Ala Leu Glu Leu Val Cys Pro Ser Ser Val Gln
 355 360 365

Ser Asp Glu Ser Leu Asp Leu Ser Ile Gln Asn Arg Gly Gly Ser Gly
 370 375 380

Leu Glu Ala Ala Tyr Ser Ile Val Ala Leu Gly Glu Glu Pro Ala Arg
 385 390 395 400

Ala Val His Pro Leu Cys Pro Ser Asp Thr Glu Ile Phe Pro Gly Asn
 405 410 415

Gly His Cys Tyr Arg Leu Val Val Glu Lys Ala Ala Trp Leu Gln Ala
 420 425 430

Gln Glu Gln Cys Gln Ala Trp Ala Gly Ala Ala Leu Ala Met Val Asp
 435 440 445

Ser Pro Ala Val Gln Arg Phe Leu Val Ser Arg Val Thr Arg Ser Leu
 450 455 460

Asp Val Trp Ile Gly Phe Ser Thr Val Gln Gly Val Glu Val Gly Pro
 465 470 475 480

Ala Pro Gln Gly Glu Ala Phe Ser Leu Glu Ser Cys Gln Asn Trp Leu
 485 490 495

Pro Gly Glu Pro His Pro Ala Thr Ala Glu His Cys Val Arg Leu Gly
 500 505 510
 Pro Thr Gly Trp Cys Asn Thr Asp Leu Cys Ser Ala Pro His Ser Tyr
 515 520 525
 Val Cys Glu Leu Gln Pro Gly Gly Pro Val Gln Asp Ala Glu Asn Leu
 530 535 540
 Leu Val Gly Ala Pro Ser Gly Asp Leu Gln Gly Pro Leu Thr Pro Leu
 545 550 555 560
 Ala Gln Gln Asp Gly Leu Ser Ala Pro His Glu Pro Val Glu Val Met
 565 570 575
 Val Phe Pro Gly Leu Arg Leu Ser Arg Glu Ala Phe Leu Thr Thr Ala
 580 585 590
 Glu Phe Gly Thr Gln Glu Leu Arg Arg Pro Ala Gln Leu Arg Leu Gln
 595 600 605
 Val Tyr Arg Leu Leu Ser Thr Ala Gly Thr Pro Glu Asn Gly Ser Glu
 610 615 620
 Pro Glu Ser Arg Ser Pro Asp Asn Arg Thr Gln Leu Ala Pro Ala Cys
 625 630 635 640
 Met Pro Gly Gly Arg Trp Cys Pro Gly Ala Asn Ile Cys Leu Pro Leu
 645 650 655
 Asp Ala Ser Cys His Pro Gln Ala Cys Ala Asn Gly Cys Thr Ser Gly
 660 665 670
 Pro Gly Leu Pro Gly Ala Pro Tyr Ala Leu Trp Arg Glu Phe Leu Phe
 675 680 685
 Ser Val Pro Ala Gly Pro Pro Ala Gln Tyr Ser Val Thr Leu His Gly
 690 695 700
 Gin Asp Val Leu Met Leu Pro Gly Asp Leu Val Gly Leu Gln His Asp
 705 710 715 720
 Ala Gly Pro Gly Ala Leu Leu His Cys Ser Pro Ala Pro Gly His Pro
 725 730 735
 Gly Pro Arg Ala Pro Tyr Leu Ser Ala Asn Ala Ser Ser Trp Leu Pro
 740 745 750
 His Leu Pro Ala Gln Leu Glu Gly Thr Trp Gly Cys Pro Ala Cys Ala
 755 760 765
 Leu Arg Leu Leu Ala Gln Arg Glu Gln Leu Thr Val Leu Leu Gly Leu
 770 775 780
 Arg Pro Asn Pro Gly Leu Arg Leu Pro Gly Arg Tyr Glu Val Arg Ala
 785 790 795 800
 Glu Val Gly Asn Gly Val Ser Arg His Asn Leu Ser Cys Ser Phe Asp
 805 810 815
 Val Val Ser Pro Val Ala Gly Leu Arg Val Ile Tyr Pro Ala Pro Arg
 820 825 830
 Asp Gly Arg Leu Tyr Val Pro Thr Asn Gly Ser Ala Leu Val Leu Gln
 835 840 845

Val Asp Ser Gly Ala Asn Ala Thr Ala Thr Ala Arg Trp Pro Gly Gly
 850 855 860
 Ser Leu Ser Ala Arg Phe Glu Asn Val Cys Pro Ala Leu Val Ala Thr
 865 870 875 880
 Phe Val Pro Ala Cys Pro Trp Glu Thr Asn Asp Thr Leu Phe Ser Val
 885 890 895
 Val Ala Leu Pro Trp Leu Ser Glu Gly Glu His Val Val Asp Val Val
 900 905 910
 Val Glu Asn Ser Ala Ser Arg Ala Asn Leu Ser Leu Arg Val Thr Ala
 915 920 925
 Glu Glu Pro Ile Cys Gly Leu Arg Ala Thr Pro Ser Pro Glu Ala Arg
 930 935 940
 Val Leu Gln Gly Val Leu Val Arg Tyr Ser Pro Val Val Glu Ala Gly
 945 950 955 960
 Ser Asp Met Val Phe Arg Trp Thr Ile Asn Asp Lys Gln Ser Leu Thr
 965 970 975
 Phe Gln Asn Val Val Phe Asn Val Ile Tyr Gln Ser Ala Ala Val Phe
 980 985 990
 Lys Leu Ser Leu Thr Ala Ser Asn His Val Ser Asn Val Thr Val Asn
 995 1000 1005
 Tyr Asn Val Thr Val Glu Arg Met Asn Arg Met Gln Gly Leu Gln Val
 1010 1015 1020
 Ser Thr Val Pro Ala Val Leu Ser Pro Asn Ala Thr Leu Ala Leu Thr
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 Ala Gly Val Leu Val Asp Ser Ala Val Glu Val Ala Phe Leu Trp Thr
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 Phe Gly Asp Gly Glu Gln Ala Leu His Gln Phe Gln Pro Pro Tyr Asn
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 Glu Ser Phe Pro Val Pro Asp Pro Ser Val Ala Gln Val Leu Val Glu
 1075 1080 1085
 His Asn Val Thr His Thr Tyr Ala Ala Pro Gly Glu Tyr Leu Leu Thr
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 Val Leu Ala Ser Asn Ala Phe Glu Asn Leu Thr Gln Gln Val Pro Val
 105 1110 1115 1120
 Ser Val Arg Ala Ser Leu Pro Ser Val Ala Val Gly Val Ser Asp Gly
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 Val Leu Val Ala Gly Arg Pro Val Thr Phe Tyr Pro His Pro Leu Pro
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 Ser Pro Gly Gly Val Leu Tyr Thr Trp Asp Phe Gly Asp Gly Ser Pro
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 Val Leu Thr Gln Ser Gln Pro Ala Ala Asn His Thr Tyr Ala Ser Arg
 1170 1175 1180
 Gly Thr Tyr His Val Arg Leu Glu Val Asn Asn Thr Val Ser Gly Ala
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 Ala Ala Gln Ala Asp Val Arg Val Phe Glu Glu Leu Arg Gly Leu Ser

1205

1210

1215

Val Asp Met Ser Leu Ala Val Glu Gln Gly Ala Pro Val Val Val Ser
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Ala Ala Val Gln Thr Gly Asp Asn Ile Thr Trp Thr Phe Asp Met Gly
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Asp Gly Thr Val Leu Ser Gly Pro Glu Ala Thr Val Glu His Val Tyr
 1250 1255 1260

Leu Arg Ala Gln Asn Cys Thr Val Thr Val Gly Ala Gly Ser Pro Ala
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Gly His Leu Ala Arg Ser Leu His Val Leu Val Phe Val Leu Glu Val
 1285 1290 1295

Leu Arg Val Glu Pro Ala Ala Cys Ile Pro Thr Gln Pro Asp Ala Arg
 1300 1305 1310

Leu Thr Ala Tyr Val Thr Gly Asn Pro Ala His Tyr Leu Phe Asp Trp
 1315 1320 1325

Thr Phe Gly Asp Gly Ser Ser Asn Thr Thr Val Arg Gly Cys Pro Thr
 1330 1335 1340

Val Thr His Asn Phe Thr Arg Ser Gly Thr Phe Pro Leu Ala Leu Val
 345 1350 1355 1360

Leu Ser Ser Arg Val Asn Arg Ala His Tyr Phe Thr Ser Ile Cys Val
 1365 1370 1375

Glu Pro Glu Val Gly Asn Val Thr Leu Gln Pro Glu Arg Gln Phe Val
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Gln Leu Gly Asp Glu Ala Trp Leu Val Ala Cys Ala Trp Pro Pro Phe
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Pro Tyr Arg Tyr Thr Trp Asp Phe Gly Thr Glu Glu Ala Ala Pro Thr
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Arg Ala Arg Gly Pro Glu Val Thr Phe Ile Tyr Arg Asp Pro Gly Ser
 425 1430 1435 1440

Tyr Leu Val Thr Val Thr Ala Ser Asn Asn Ile Ser Ala Ala Asn Asp
 1445 1450 1455

Ser Ala Leu Val Glu Val Gln Glu Pro Val Leu Val Thr Ser Ile Lys
 1460 1465 1470

Val Asn Gly Ser Leu Gly Leu Glu Leu Gln Gln Pro Tyr Leu Phe Ser
 1475 1480 1485

Ala Val Gly Arg Gly Arg Pro Ala Ser Tyr Leu Trp Asp Leu Gly Asp
 1490 1495 1500

Gly Gly Trp Leu Glu Gly Pro Glu Val Thr His Ala Tyr Asn Ser Thr
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Gly Asp Phe Thr Val Arg Val Ala Gly Trp Asn Glu Val Ser Arg Ser
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Glu Ala Trp Leu Asn Val Thr Val Lys Arg Arg Val Arg Gly Leu Val
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Val Asn Ala Ser Arg Thr Val Val Pro Leu Asn Gly Ser Val Ser Phe
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Ser Thr Ser Leu Glu Ala Gly Ser Asp Val Arg Tyr Ser Trp Val Leu
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 Cys Asp Arg Cys Thr Pro Ile Pro Gly Gly Pro Thr Ile Ser Tyr Thr
 585 1590 1595 1600
 Phe Arg Ser Val Gly Thr Phe Asn Ile Ile Val Thr Ala Glu Asn Glu
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 Val Gly Ser Ala Gln Asp Ser Ile Phe Val Tyr Val Leu Gln Leu Ile
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 Glu Gly Leu Gln Val Val Gly Gly Arg Tyr Phe Pro Thr Asn His
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 Thr Val Gln Leu Gln Ala Val Val Arg Asp Gly Thr Asn Val Ser Tyr
 1650 1655 1660
 Ser Trp Thr Ala Trp Arg Asp Arg Gly Pro Ala Leu Ala Gly Ser Gly
 665 1670 1675 1680
 Lys Gly Phe Ser Leu Thr Val Leu Glu Ala Gly Thr Tyr His Val Gln
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 Leu Arg Ala Thr Asn Met Leu Gly Ser Ala Trp Ala Asp Cys Thr Met
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 Asp Phe Val Glu Pro Val Gly Trp Leu Met Val Ala Ala Ser Pro Asn
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 Gly Ser Gly Val Val Tyr Thr Trp Ser Leu Glu Glu Gly Leu Ser Trp
 745 1750 1755 1760
 Glu Thr Ser Glu Pro Phe Thr Thr His Ser Phe Pro Thr Pro Gly Leu
 1765 1770 1775
 His Leu Val Thr Met Thr Ala Gly Asn Pro Leu Gly Ser Ala Asn Ala
 1780 1785 1790
 Thr Val Glu Val Asp Val Gln Val Pro Val Ser Gly Leu Ser Ile Arg
 1795 1800 1805
 Ala Ser Glu Pro Gly Gly Ser Phe Val Ala Ala Gly Ser Ser Val Pro
 1810 1815 1820
 Phe Trp Gly Gln Leu Ala Thr Gly Thr Asn Val Ser Trp Cys Trp Ala
 825 1830 1835 1840
 Val Pro Gly Gly Ser Ser Lys Arg Gly Pro His Val Thr Met Val Phe
 1845 1850 1855
 Pro Asp Ala Gly Thr Phe Ser Ile Arg Leu Asn Ala Ser Asn Ala Val
 1860 1865 1870
 Ser Trp Val Ser Ala Thr Tyr Asn Leu Thr Ala Glu Glu Pro Ile Val
 1875 1880 1885
 Gly Leu Val Leu Trp Ala Ser Ser Lys Val Val Ala Pro Gly Gln Leu
 1890 1895 1900
 Val His Phe Gln Ile Leu Leu Ala Ala Gly Ser Ala Val Thr Phe Arg
 1905 1910 1915 1920

Leu Gln Val Gly Gly Ala Asn Pro Glu Val Leu Pro Gly Pro Arg Phe
 1925 1930 1935
 Ser His Ser Phe Pro Arg Val Gly Asp His Val Val Ser Val Arg Gly
 1940 1945 1950
 Lys Asn His Val Ser Trp Ala Gln Ala Gln Val Arg Ile Val Val Leu
 1955 1960 1965
 Glu Ala Val Ser Gly Leu Gln Val Pro Asn Cys Cys Glu Pro Gly Ile
 1970 1975 1980
 Ala Thr Gly Thr Glu Arg Asn Phe Thr Ala Arg Val Gln Arg Gly Ser
 985 1990 1995 2000
 Arg Val Ala Tyr Ala Trp Tyr Phe Ser Leu Gln Lys Val Gln Gly Asp
 2005 2010 2015
 Ser Leu Val Ile Leu Ser Gly Arg Asp Val Thr Tyr Thr Pro Val Ala
 2020 2025 2030
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 Leu Val Ser Phe Phe Val Ala Gln Ala Thr Val Thr Val Gln Val Leu
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 Ala Ser Cys Gln Arg Pro Gly Arg Pro Ala Arg Val Ala Leu Pro Gly
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 Val Asp Val Ser Arg Pro Arg Leu Val Leu Pro Arg Leu Ala Leu Pro
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2275

2280

2285

Gly Asp Gln Thr Pro Leu Ser Phe His Trp Ala Cys Val Ala Ser Thr
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Gln Arg Glu Ala Gly Gly Cys Ala Leu Asn Phe Gly Pro Arg Gly Ser
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Ser Thr Val Thr Ile Pro Arg Glu Arg Leu Ala Ala Gly Val Glu Tyr
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Thr Phe Ser Leu Thr Val Trp Lys Ala Gly Arg Lys Glu Glu Ala Thr
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Asn Gln Thr Val Leu Ile Arg Ser Gly Arg Val Pro Ile Val Ser Leu
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Glu Cys Val Ser Cys Lys Ala Gln Ala Val Tyr Glu Val Ser Arg Ser
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Ser Tyr Val Tyr Leu Glu Gly Arg Cys Leu Asn Cys Ser Ser Gly Ser
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Lys Arg Gly Arg Trp Ala Ala Arg Thr Phe Ser Asn Lys Thr Leu Val
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Leu Arg Arg Gly Val Leu Arg Asp Gly Glu Gly Tyr Thr Phe Thr Leu
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Thr Val Leu Gly Arg Ser Gly Glu Glu Gly Cys Ala Ser Ile Arg
 2450 2455 2460

Leu Ser Pro Asn Arg Pro Pro Leu Gly Gly Ser Cys Arg Leu Phe Pro
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Leu Gly Ala Val His Ala Leu Thr Thr Lys Val His Phe Glu Cys Thr
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Gly Trp His Asp Ala Glu Asp Ala Gly Ala Pro Leu Val Tyr Ala Leu
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Leu Leu Arg Arg Cys Arg Gln Gly His Cys Glu Glu Phe Cys Val Tyr
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Lys Gly Ser Leu Ser Ser Tyr Gly Ala Val Leu Pro Pro Gly Phe Arg
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Pro His Phe Glu Val Gly Leu Ala Val Val Val Gln Asp Gln Leu Gly
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Ala Ala Val Val Ala Leu Asn Arg Ser Leu Ala Ile Thr Leu Pro Glu
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Pro Asn Gly Ser Ala Thr Gly Leu Thr Val Trp Leu His Gly Leu Thr
 2580 2585 2590

Ala Ser Val Leu Pro Gly Leu Leu Arg Gln Ala Asp Pro Gln His Val
 2595 2600 2605

Ile Glu Tyr Ser Leu Ala Leu Val Thr Val Leu Asn Glu Tyr Glu Arg
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Ala Leu Asp Val Ala Ala Glu Pro Lys His Glu Arg Gln His Arg Ala
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Gln Ile Arg Lys Asn Ile Thr Glu Thr Leu Val Ser Leu Arg Val His
2645 2650 2655

Thr Val Asp Asp Ile Gln Gln Ile Ala Ala Ala Leu Ala Gln Cys Met
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Gly Pro Ser Arg Glu Leu Val Cys Arg Ser Cys Leu Lys Gln Thr Leu
2675 2680 2685

His Lys Leu Glu Ala Met Met Leu Ile Leu Gln Ala Glu Thr Thr Ala
2690 2695 2700

Gly Thr Val Thr Pro Thr Ala Ile Gly Asp Ser Ile Leu Asn Ile Thr
705 2710 2715 2720

Gly Asp Leu Ile His Leu Ala Ser Ser Asp Val Arg Ala Pro Gln Pro
2725 2730 2735

Ser Glu Leu Gly Ala Glu Ser Pro Ser Arg Met Val Ala Ser Gln Ala
2740 2745 2750

Tyr Asn Leu Thr Ser Ala Leu Met Arg Ile Leu Met Arg Ser Arg Val
2755 2760 2765

Leu Asn Glu Glu Pro Leu Thr Leu Ala Gly Glu Glu Ile Val Ala Gln
2770 2775 2780

Gly Lys Arg Ser Asp Pro Arg Ser Leu Leu Cys Tyr Gly Gly Ala Pro
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生物工程系

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35 40 45
Ile Asp Lys Lys Leu Met Ile Ser Gly Gly Leu Glu Pro Pro Thr Phe
50 55 60
Cys Val Leu Asp Arg Cys Asp Asn His Tyr Thr Thr Lys Pro Arg His
65 70 75 80
Leu Pro Pro Phe Glu Val Phe Leu Phe Val Val Ile Phe Lys Cys Glu
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Pro Ser Ser Met Asn Tyr Gly Ala Ala Asp Glu Arg Trp Ala Asn Pro
100 105 110
Pro Gln Pro Val Ala Ala Ala Glu His Gly Pro Ser Phe Asp His Ser
115 120 125
Met Val Ser Glu Glu Tyr Glu His Asp Lys Lys Asn Pro Ala Gln
130 135 140
Lys Glu Gly Ile Ser Phe Ser Gln Ala Leu Leu Ala Ser Gly His Glu
145 150 155 160
Lys Ser Asp Gly Lys Ile Lys Leu Thr Ala Arg Ser Phe Met Glu Val
165 170 175

Gly Gly Tyr Ala Val Phe Leu Ile Val Leu Val Tyr Val Ala Phe Ala
 180 185 190
 Gln Asn Ser Ile Gln Ser Tyr Tyr Tyr Ser Lys Val Met Ser Asp Leu
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 Thr Ser Met Asp Asn Ile Trp Asp Trp Leu Ser Gln Val Leu Ile Pro
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 Gly Ile Tyr Trp Thr Glu Thr Ser Asn Ser Thr Asp Asn Glu Asn Met
 245 250 255
 Ile Tyr Tyr Glu Asn Arg Leu Leu Gly Glu Pro Arg Ile Arg Met Leu
 260 265 270
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 275 280 285
 Ile Lys Glu Cys Phe Ala Asn Tyr Glu Glu Lys Leu Glu Asp Lys Thr
 290 295 300
 Met Val Gly Asp Gly Ser Val Asp Ala Phe Ile Tyr Ala Thr Ala Lys
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 Glu Leu Glu Asn Leu Lys Thr Val Gly Thr Ile Ala Ser Tyr Gly Gly
 325 330 335
 Gly Gly Phe Val Gln Arg Leu Pro Val Ala Gly Ser Thr Glu Ala Gln
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 Gly Phe Ser Val Ala Thr Ile Ile Leu Ser Val Asn Arg Thr Lys Thr
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 Gly Val Asn Arg Val Asn Ser Val Ile Glu Asn Gly Leu Thr Asn Ala
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 Pro Phe Asp Asp Val Thr Ser Ser Glu Asn Ser Tyr Leu Asn Ile Lys
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 Ala Cys Val Val Phe Val Ala Trp Val Lys Val Phe Lys Phe Ile Ser
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 Val Asn Lys Thr Met Ser Gln Leu Ser Ser Thr Leu Thr Arg Ser Ala

530

Lys	Asp	Ile	Gly	Gly	Phe	Ala	Val	Met	Phe	Ala	Val	Phe	Phe	Phe	Ala
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Phe	Ala	Gln	Phe	Gly	Tyr	Leu	Cys	Phe	Gly	Thr	Gln	Ile	Ala	Asp	Tyr
								565	570					575	
Ser	Asn	Leu	Tyr	Asn	Ser	Ala	Phe	Ala	Leu	Leu	Arg	Leu	Ile	Leu	Gly
							580		585					590	
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Ala	Phe	Phe	Ile	Ala	Tyr	Val	Phe	Phe	Val	Ser	Phe	Ile	Leu	Leu	Asn
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Met	Phe	Leu	Ala	Ile	Ile	Asn	Asp	Ser	Tyr	Val	Glu	Val	Lys	Ala	Glu
						625	630				635				640
Leu	Ala	Arg	Lys	Lys	Asp	Gly	Glu	Gly	Ile	Leu	Asp	Trp	Phe	Met	Asn
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Lys	Val	Arg	Gly	Leu	Thr	Lys	Arg	Gly	Lys	Arg	Pro	Asp	Ala	Pro	Gly
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Glu	Asp	Ala	Thr	Tyr	Glu	Asp	Tyr	Lys	Leu	Met	Leu	Tyr	Arg	Ala	Gly
						675	680					685			
Tyr	Ala	Glu	Lys	Asp	Ile	Asn	Glu	Ala	Phe	Thr	Arg	Phe	Asn	Val	Thr
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Ser	Met	Thr	Glu	His	Val	Pro	Glu	Lys	Val	Ala	Glu	Asp	Ile	Ala	Asp
						705	710				715				720
Glu	Val	Ala	Arg	Met	Thr	Glu	Gln	Lys	Arg	Asn	Tyr	Met	Glu	Asn	His
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Arg	Asp	Tyr	Ala	Asn	Leu	Asn	Arg	Arg	Val	Asp	Gln	Met	Gln	Glu	Ser
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Val	Phe	Ser	Ile	Val	Asp	Arg	Ile	Glu	Gly	Val	Asn	Ala	Thr	Leu	Gln
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Thr	Ile	Glu	Lys	Gln	Arg	Val	Gln	Gln	Gln	Asp	Gly	Gly	Asn	Leu	Met
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Asp	Leu	Ser	Ala	Leu	Leu	Thr	Asn	Gln	Val	Arg	Asn	Arg	Glu	Ser	Ala
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<220> Description of Artificial Sequence: Outside primer for PCR screening of
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DRAFT

<210> 8
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<212> DNA
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<220>
<223> Description of Artificial Sequence: Outside primer for PCR screening of
lov-1 genomic (sy582) deletion

<400> 8
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<210> 9
<211> 22
<212> DNA
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<220>
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<212> DNA
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<210> 13
<211> 22

<212> DNA
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23

<210> 15
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145 150 155 160
Glu Ala Lys Tyr Glu Val Cys Tyr Asp Asp Gly Ile Asp Arg Cys Asp
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195

200

205

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DRAFT - 04/06/00

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835 840 845
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865 870 875 880
Thr Ser Thr Gly Ser Ser Ser Glu Ser Ser Ala Ile Ser Thr Thr Ser
885 890 895
Gly Ile Glu Ser Thr Ser Thr Leu Glu Ala Ser Thr Thr Asp Ala Ser

900

905

910

Gln Asp Ser Ser Thr Ser Thr Ser Asp Ser Gly Thr Thr Ser Asp Ser
 915 920 925

Thr Thr Ile Asp Ser Ser Asn Ser Thr Pro Ser Thr Ser Asp Ser Ser
 930 935 940

Gly Leu Ser Gln Thr Pro Ser Asp Ser Ser Ala Ser Asp Ser Met
 945 950 955 960

Arg Thr Thr Thr Val Asp Pro Asp Ala Ser Thr Glu Thr Pro Tyr Asp
 965 970 975

Phe Val Leu Glu Asn Leu Thr Trp Asn Glu Thr Val Tyr Tyr Ser Glu
 980 985 990

Asn Pro Phe Tyr Ile Thr Pro Ile Pro Asn Lys Glu Pro Gly Ala Leu
 995 1000 1005

Thr Thr Ala Met Thr Cys Gln Cys Arg Asn Asp Ser Ser Gln Pro Phe
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Val Leu Leu Lys Glu Ser Asn Cys Leu Thr Glu Phe Gly Lys Asn Gly
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Ala Tyr Ser Ala Ser Val Ser Phe Asn Pro Met Thr Ser Phe Val Pro
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Ala Thr Gly Thr Tyr Glu Phe Leu Ile Asn Val Thr Asn Arg Ala Ser
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Gly Glu Ser Ala Ser His Ile Phe Thr Met Asn Val Val Leu Pro Thr
 1075 1080 1085

Thr Thr Thr Glu Thr Pro Pro Thr Thr Val Ser Ser Asp Asp Ala
 1090 1095 1100

Gly Gly Lys Thr Gly Gly Thr Gly Ala Thr Gly Gly Thr Gly Gly Thr
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Gly Ser Gly Ser Ala Thr Thr Leu Ser Thr Gly Asp Ala Val Arg
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Ser Thr Thr Ser Gly Ser Gly Gln Ser Ser Thr Gly Ser Gly
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Ala Gly Gly Ser Gly Thr Thr Ala Ser Gly Ser Gly Ser Gly Ser
 1155 1160 1165

Ser Gly Thr Gly Ser Asp Gly Val Asn Ser Gly Lys Thr Thr Ala Leu
 1170 1175 1180

Asn Gly Asp Gly Thr Gly Ser Gly Thr Ala Thr Thr Pro Gly Ser His
 1185 1190 1195 1200

Leu Gly Asp Gly Gly Ser Thr Ser Gly Ser Gly Ser Asp Ser Asn Gly
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Ser Ser Gly Val Ser Thr Lys Ser Ser Ser Gly Ser Asp Thr Ser Gly
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Ser Ser Asp Ser Ser Gly Ala Asn Gly Ala Phe Ser Ala Thr Ala Gln
 1235 1240 1245

Pro Ser Thr Arg Thr Thr Lys Thr Arg Ser Ser Leu Ala Thr Val Ser
 1250 1255 1260

Pro Ile Ser Ala Ala Glu Gln Ala Ile Asp Ala Gln Lys Ala Asp
 1265 1270 1275 1280
 Val Met Asn Gln Leu Ala Gly Ile Met Asp Gly Ser Ala Ser Asn Asn
 1285 1290 1295
 Ser Leu Asn Thr Ser Ser Leu Leu Asn Gln Ile Ser Ser Leu Pro
 1300 1305 1310
 Ala Ala Asp Leu Val Glu Val Ala Gln Ser Leu Leu Ser Asn Thr Leu
 1315 1320 1325
 Lys Ile Pro Gly Val Gly Asn Met Ser Ser Val Asp Val Leu Lys Thr
 1330 1335 1340
 Leu Gln Asp Asn Ile Ala Thr Thr Asn Ser Glu Leu Ala Asp Glu Met
 1345 1350 1355 1360
 Ala Lys Val Ile Thr Lys Leu Ala Asn Val Asn Met Thr Ser Ala Gln
 1365 1370 1375
 Ser Leu Asn Ser Val Leu Ser Ser Leu Asp Leu Ala Leu Lys Gly Ser
 1380 1385 1390
 Thr Val Tyr Thr Leu Gly Val Ser Ser Thr Lys Ser Lys Asp Gly Thr
 1395 1400 1405
 Tyr Ala Val Ile Phe Gly Tyr Val Ile Ala Ser Gly Tyr Thr Leu Val
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 Ser Pro Arg Cys Thr Leu Ser Ile Tyr Gly Ser Thr Ile Tyr Leu Thr
 1425 1430 1435 1440
 Gly Asp Thr Arg Ala Ser Tyr Lys Gln Leu Asp Gly Asp Thr Val Thr
 1445 1450 1455
 Ala Asp Thr Met Leu Ala Ala Ile Gly Ile Gln Gly Met Phe Ala
 1460 1465 1470
 Thr Asn Gly Arg Thr Val Gln Val Glu Gln Asp Lys Ile Asp Asp Lys
 1475 1480 1485
 Arg Ser Leu Val Ser Gly Asn Ile Met Ala Thr Met Ser Gly Val Gly
 1490 1495 1500
 Asp Val Gln Ser Gly Glu Tyr Ser Tyr Asn Asp Met Tyr Val Thr Ala
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 Trp Asn Val Thr Tyr Asp Asn Ser Thr Val Gly Ser Thr Ser Gln Lys
 1525 1530 1535
 Asn Thr Ser Phe Ser Phe Asn Ile Pro Val Ser Glu Val Gln Tyr Ile
 1540 1545 1550
 Leu Leu Ile Glu Ser Gly Thr Met Ile Lys Leu His Ser Thr Gln Asn
 1555 1560 1565
 Ile Val Ser Arg Gly Leu Val Val Thr Ala Ser Tyr Gly Val Thr
 1570 1575 1580
 Tyr Thr Ile Thr Cys Thr Asn Gly Thr Gly Lys Phe Val Glu Val Asp
 1585 1590 1595 1600
 Thr Asp Asn Ala Ile Phe Ser Tyr Asn Ala Asp Ser Phe Thr Val Val
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Ala Ser Asp Gly Ser Ser Ala Ser Thr Val Lys Lys Leu Ile Gln Met
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 Pro Ile Val Ile Glu Asn Val Asn Leu Ala Leu Phe Asn Gln Thr Thr
 1635 1640 1645
 Ser Pro Leu Val Phe Ser Asn Ala Gly Ser Tyr Ser Met Arg Met Val
 1650 1655 1660
 Leu Ser Pro Gln Asp Ile Gly Ile Pro Ala Val Ser Ala Leu Ser Gln
 1665 1670 1675 1680
 Thr Val Ser Ile Ser Thr Leu Ser Pro Thr Ala Ser Tyr Thr Lys Asp
 1685 1690 1695
 Asp Leu Gln Ser Leu Ile Lys Glu Gln Thr Leu Val Thr Val Ser Gly
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 Thr Thr Ser Asn Ser Leu Leu Ser Ile Ala Gly Ser Leu Thr Ser Ala
 1715 1720 1725
 Leu Lys Ile Ala Leu Asp Asn Pro Leu Ser Ser Asp Leu Ala Ala Asn
 1730 1735 1740
 Leu Lys Tyr Ala Thr Asp Asn Tyr Asp Ser Leu Tyr Asn Val Leu Pro
 1745 1750 1755 1760
 Ser Asp Pro Asp Asn Ile Val Tyr Val Glu Glu Met Thr Ser Glu Glu
 1765 1770 1775
 Trp Ala Ala Tyr Val Thr Lys Met Phe Gln Lys Asn Ile Ala Lys Asn
 1780 1785 1790
 Leu Ala Asn Gln Leu Ala Ser Thr Leu Asp Thr Leu Glu Asn Thr Leu
 1795 1800 1805
 Ala Ala Arg Ala Ile Ala Thr Gly Asn Leu Pro Tyr Asp Tyr Ser Asn
 1810 1815 1820
 Ser Val Asp Gly Thr Gly Met Val Ile Val Ile Asp Asp Ala Ser Asn
 1825 1830 1835 1840
 Ile Val Gly Lys Thr Gln Asn Cys Glu Glu Trp Ala Phe Lys Leu Pro
 1845 1850 1855
 Ser Pro Ala Ser Thr Leu Asn Thr Ala Glu Ile Thr Asp Lys Thr Leu
 1860 1865 1870
 Ile Gln Val Gly Leu Val Cys Tyr Ala Thr Asn Pro Arg Thr Tyr Val
 1875 1880 1885
 Asp Asn Phe Asp Met Leu Ile Thr Ser Gly Ala Leu Glu Ala His Ile
 1890 1895 1900
 Lys Asp Glu Asn Gln Ile Ile Ile Pro Ile Thr Gly Thr Thr Ala Pro
 1905 1910 1915 1920
 Ile Tyr Val Asn Gly Arg Gly Ser Glu Asp Asp Ala Val Leu Thr Leu
 1925 1930 1935
 Met Gln Gln Gly Asp Phe Ala Ser Tyr Gln Ile Leu Asp Leu His Ala
 1940 1945 1950
 Phe Arg Thr Thr Asn Trp Asn Asn Ser Leu Gln Val Glu Ile Ile Ala
 1955 1960 1965
 Ser Gln Asp Tyr Glu Ile Pro Asn Asn Asp Asp Thr Tyr Met Phe Ser

1970	1975	1980
Ser Phe Gln Ser Leu Pro Gly Pro Leu Glu Ser Asn His Glu Trp Ile		2000
1985	1990	1995
Phe Asp Leu Asn Thr Leu Asn Lys Thr Ser Asn Tyr Phe Val Thr Ala		2015
2005		
Gly Asn Leu Ile Asn Asn Thr Gly Leu Phe Ile Gly Ile Gly Lys		2030
2020	2025	
Arg Asn Ser Ser Thr Asn Thr Gly Asn Ser Ser Asp Ile Val Asn Tyr		2045
2035	2040	
Gly Gln Tyr Asp Ser Met Gln Trp Ser Phe Ala Arg Ser Val Pro Met		
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Asp Tyr Gln Val Ala Ala Val Ser Lys Gly Cys Tyr Phe Tyr Gln Lys		2080
2065	2070	2075
Thr Ser Asp Val Phe Asn Ser Glu Gly Met Tyr Pro Ser Asp Gly Gln		2095
2085	2090	
Gly Met Gln Phe Val Asn Cys Ser Thr Asp His Leu Thr Met Phe Ser		
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Val Gly Ala Phe Asn Pro Thr Ile Asp Ala Asp Phe Ser Tyr Asn Tyr		2125
2115	2120	
Asn Val Asn Glu Ile Glu Lys Asn Val Lys Val Met Ile Ala Ala Val		
2130	2135	2140
Phe Met Leu Val Val Tyr Gly Cys Leu Thr Ile Asn Ala Ile Ile Cys		2160
2145	2150	2155
Gln Arg Lys Asp Ala Ser Arg Gly Arg Leu Arg Phe Leu Lys Asp Asn		2175
2165	2170	
Glu Pro His Asp Gly Tyr Met Tyr Val Ile Ala Val Glu Thr Gly Tyr		2190
2180	2185	
Arg Met Phe Ala Thr Thr Asp Ser Thr Ile Cys Phe Asn Leu Ser Gly		
2195	2200	2205
Asn Glu Gly Asp Gln Ile Phe Arg Ser Phe Arg Ser Glu Glu Asp Gly		
2210	2215	2220
Asn Trp Glu Phe Pro Phe Ser Trp Gly Thr Thr Asp Arg Phe Val Met		2240
2225	2230	2235
Thr Thr Ala Phe Pro Leu Gly Glu Leu Glu Tyr Met Arg Leu Trp Leu		2255
2245		
Asp Asp Ala Gly Leu Asp His Arg Glu Ser Trp Tyr Cys Asn Arg Ile		
2260	2265	2270
Ile Val Lys Asp Leu Gln Thr Gln Asp Ile Tyr Tyr Phe Pro Phe Asn		
2275	2280	2285
Asn Trp Leu Gly Thr Lys Asn Gly Asp Gly Glu Thr Glu Arg Leu Ala		
2290	2295	2300
Arg Val Glu Tyr Lys Arg Arg Phe Leu Asp Glu Ser Met Ser Met His		2320
2305	2310	2315
Met Leu Ala Gln Thr Ile Ser Trp Phe Ala Met Phe Thr Gly Gly		

2325

2330

2335

Asn Arg Leu Arg Asp Arg Val Ser Arg Gln Asp Tyr Ser Val Ser Ile
 2340 2345 2350
 Ile Phe Ser Leu Val Val Val Ser Met Ile Ser Ile Thr Ile Leu Lys
 2355 2360 2365
 Ser Asp Asn Ser Ile Ile Ser Asp Ser Lys Ser Val Ser Glu Phe Thr
 2370 2375 2380
 Phe Thr Ile Lys Asp Ile Ala Phe Gly Val Gly Phe Gly Val Leu Ile
 2385 2390 2395 2400
 Thr Phe Leu Asn Ser Leu His Ile Leu Leu Cys Thr Lys Cys Arg Ser
 2405 2410 2415
 His Ser Glu His Tyr Tyr Lys Lys Arg Lys Arg Glu Asp Pro Glu
 2420 2425 2430
 Phe Lys Asp Asn Ser Gly Ser Trp Pro Met Phe Met Ala Gly Met Ala
 2435 2440 2445
 Arg Thr Ile Ile Val Phe Pro Val Leu Met Gly Leu Ile Tyr Ile Ser
 2450 2455 2460
 Gly Ala Gly Met Ser Leu Met Asp Asp Leu Ala Asn Ser Phe Tyr Ile
 2465 2470 2475 2480
 Arg Phe Leu Ile Ser Leu Ile Leu Trp Ala Val Val Phe Glu Pro Ile
 2485 2490 2495
 Lys Gly Leu Ile Trp Ala Phe Leu Ile Leu Lys Thr Arg Lys Ser His
 2500 2505 2510
 Lys Ile Ile Asn Lys Leu Glu Gly Ser Asp Gly Thr Val Val Lys Tyr
 2515 2520 2525
 Tyr Glu Met Leu Tyr Ile Phe Phe Ser Val Leu Ile Phe Val Lys Glu
 2530 2535 2540
 Ile Val Phe Tyr Leu Tyr Gly Arg Tyr Lys Val Ile Thr Thr Met Lys
 2545 2550 2555 2560
 Pro Thr Arg Asn Pro Phe Lys Ile Val Tyr Gln Leu Ala Leu Gly Asn
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 Phe Ser Pro Trp Asn Phe Met Asp Leu Ile Val Gly Ala Leu Ala Val
 2580 2585 2590
 Ala Ser Val Leu Ala Tyr Thr Ile Arg Gln Arg Thr Thr Asn Arg Ala
 2595 2600 2605
 Met Glu Asp Phe Asn Ala Asn Asn Gly Asn Ser Tyr Ile Asn Leu Thr
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 Glu Gln Arg Asn Trp Glu Ile Val Phe Ser Tyr Cys Leu Ala Gly Ala
 2625 2630 2635 2640
 Val Phe Phe Thr Ser Cys Lys Met Ile Arg Ile Leu Arg Phe Asn Arg
 2645 2650 2655
 Arg Ile Gly Val Leu Ala Ala Thr Leu Asp Asn Ala Leu Gly Ala Ile
 2660 2665 2670
 Val Ser Phe Gly Ile Ala Phe Leu Phe Ser Met Thr Phe Asn Ser

2675

2680

2685

Val Leu Tyr Ala Val Leu Gly Asn Lys Met Gly Gly Tyr Arg Ser Leu
2690 2695 2700

Met Ala Thr Phe Gln Thr Ala Leu Ala Gly Met Leu Gly Lys Leu Asp
2705 2710 2715 2720

Val Thr Ser Ile Gln Pro Ile Ser Gln Phe Ala Phe Val Val Ile Met
2725 2730 2735

Leu Tyr Met Ile Ala Gly Ser Lys Leu Val Leu Gln Leu Tyr Val Thr
2740 2745 2750

Ile Ile Met Phe Glu Phe Glu Glu Ile Arg Asn Asp Ser Glu Lys Gln
2755 2760 2765

Thr Asn Asp Tyr Glu Ile Ile Asp His Ile Lys Tyr Lys Thr Lys Arg
2770 2775 2780

Arg Leu Gly Leu Leu Glu Pro Lys Asp Phe Ala Pro Val Ser Ile Ala
2785 2790 2795 2800

Asp Thr Gln Lys Asp Phe Arg Leu Phe His Ser Ala Val Ala Lys Val
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Asn Leu Leu His His Arg Ala Thr Arg Met Leu Gln Thr Gln Gly Gln
2820 2825 2830

Tyr Gln Asn Gln Thr Val Ile Asn Tyr Thr Leu Ser Tyr Asp Pro Val
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Ser Ala Ile His Glu Thr Gly Pro Lys Arg Phe Gln Lys Trp Arg Leu
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Asn Asp Val Glu Lys Asp
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<211> 200
<212> PRT

<213> C. Elegans Pkd-2 deletion mutant (sy606) protein

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Pro Phe Glu Glu Gly His Thr Leu Trp Met Lys Arg Glu Lys Ile Lys
20 25 30

His Leu Gln Arg Ile Leu Gln Phe His Ser Asp Glu Ser Ile Leu Met
35 40 45

Ile Asp Lys Lys Leu Met Ile Ser Gly Gly Leu Glu Pro Pro Thr Phe
50 55 60

Cys Val Leu Asp Arg Cys Asp Asn His Tyr Thr Thr Lys Pro Arg His
65 70 75 80

Leu Pro Pro Phe Glu Val Phe Leu Phe Val Val Ile Phe Lys Cys Glu
85 90 95

Pro Ser Ser Met Asn Tyr Gly Ala Ala Asp Glu Arg Trp Ala Asn Pro
100 105 110

Pro Gln Pro Val Ala Ala Glu His Gly Pro Ser Phe Asp His Ser
115 120 125

Met Val Ser Glu Glu Tyr Glu His Asp Lys Lys Asn Pro Ala Gln
130 135 140

Lys Glu Gly Ile Ser Phe Ser Gln Ala Leu Leu Ala Ser Gly His Glu
145 150 155 160

Lys Ser Asp Gly Lys Ile Lys Leu Thr Ala Arg Ser Phe Met Glu Val
165 170 175

Gly Gly Tyr Ala Val Phe Leu Ile Val Leu Val Tyr Asp Ser Ser Thr
180 185 190

Pro Arg Gln Lys Ser Leu Lys Thr
195 200